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L3             199 S L2
L4             506 S PHOSPHATIDIC ACID/CLM
L5              80 S L3 AND L4
L6               2 S L5 AND HAIR
L7              56 S PHOSPHATIDIC ACID/AB
L8               8 S L7 AND L5
L9               8 S L8 NOT L6

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L11              7 S L10 AND HAIR
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L12              1 S E1

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L4             14 FILE CAPLUS
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L3        218645 S TOPICAL/CLM OR SKIN/CLM OR EXTERNAL/CLM
L4            81 S L2 AND L3
L5             5 S PHOSPHATIDIC ACID/AB AND L4

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L6 ANSWER 2 OF 2 USPATFULL on STN

ACCESSION NUMBER:	2001:147485 USPATFULL		
TITLE:	Amphiphilic materials and liposome formulations thereof		
INVENTOR(S):	Aneja, Rajindra, Ithaca, NY, United States		
PATENT ASSIGNEE(S):	Nutrimed Biotech, Ithaca, NY, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6284267	B1	20010904
APPLICATION INFO.:	US 1997-912978		19970813 (8)
	NUMBER		DATE
PRIORITY INFORMATION:	US 1996-24382P		19960814 (60)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Kishore, Gollamudi S.		
LEGAL REPRESENTATIVE:	Williams, Morgan and Amerson		
NUMBER OF CLAIMS:	57		
EXEMPLARY CLAIM:	54		
NUMBER OF DRAWINGS:	10 Drawing Figure(s); 10 Drawing Page(s)		
LINE COUNT:	2626		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

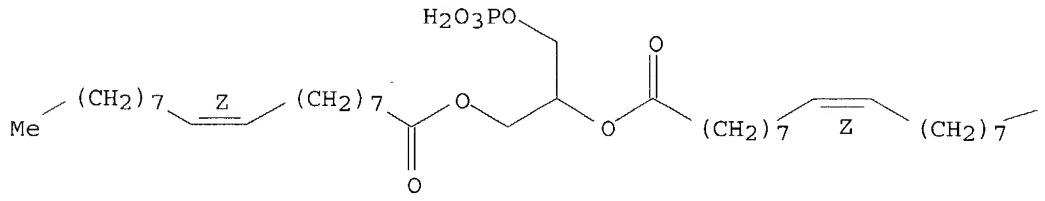
IT **14268-17-8 17966-25-5**
(amphiphilic materials and liposome formulations thereof)

RN 14268-17-8 USPATFULL

CN 9-Octadecenoic acid (9Z)-, 1-[(phosphonooxy)methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A

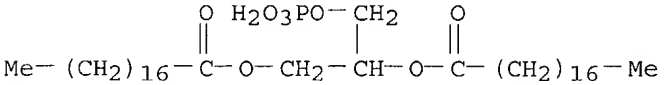


PAGE 1-B

Me

RN 17966-25-5 USPATFULL

CN Octadecanoic acid, 1-[(phosphonooxy)methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)



DETD Novel amphiphiles are applicable as conditioning agents in skin, **hair** and nail care products, providing moisturizing and lubrication attributes similar to endogenous ceramides. Further applications are envisaged as cleansing agents in toothpastes, as self-emulsifying cream base for emollients, as oil absorbers for oily skin, and anti-gloss agents in lipid-based cosmetic formulations.

CLM What is claimed is:
16. The amphiphilic molecule of claim 15, wherein at least one of said hydrophobic moieties is selected from the group consisting of 1,2-distearoylglycerol, 1,2-dioleoylglycerol, ceramidophosphoric acid, O-acetyl-ceramidophosphoric acid, 1,2-dioleyl-3-dimethylaminopropanediol, 1,2-dimyristoyl-3-dimethylaminopropanediol, cholesterol, β-sitosterol, distearoyl **phosphatidic acid**, dioleylphosphatidic acid, a bisphosphatidyl glycerol, phosphatidylethanolamine and a phosphatidylinositol.

IT 83-46-5, β-Sitosterol 112-77-6, Oleoyl chloride 2442-61-7, 1,2-Dioleoylglycerol 7664-38-2D, Phosphoric acid, acetyl/ceramido derivs., reactions **14268-17-8 17966-25-5** 25322-68-3, Polyethyleneglycol 51063-97-9, 1,2-Distearoylglycerol 72719-84-7 127512-29-2
(amphiphilic materials and liposome formulations thereof)

=>

corporation)

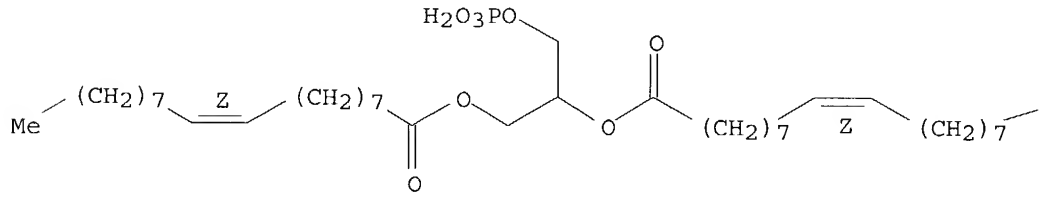
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6284267	B1	20010904
APPLICATION INFO.:	US 1997-912978		19970813 (8)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1996-24382P	19960814 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Kishore, Gollamudi S.
LEGAL REPRESENTATIVE: Williams, Morgan and Amerson
NUMBER OF CLAIMS: 57
EXEMPLARY CLAIM: 54
NUMBER OF DRAWINGS: 10 Drawing Figure(s); 10 Drawing Page(s)
LINE COUNT: 2626
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **14268-17-8 17966-25-5**
(amphiphilic materials and liposome formulations thereof)
RN 14268-17-8 USPATFULL
CN 9-Octadecenoic acid (9Z)-, 1-[(phosphonooxy)methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)

Double bond geometry as shown.

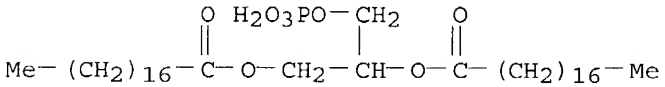
PAGE 1-A



PAGE 1-B

Me

RN 17966-25-5 USPATFULL
CN Octadecanoic acid, 1-[(phosphonooxy)methyl]-1,2-ethanediyl ester (9CI) (CA INDEX NAME)



DETD Novel amphiphiles are applicable as conditioning agents in skin, **hair** and nail care products, providing moisturizing and lubrication attributes similar to endogenous ceramides. Further applications are envisaged as cleansing agents in toothpastes, as self-emulsifying cream base for emollients, as oil absorbers for oily skin, and anti-gloss agents in lipid-based cosmetic formulations.
CLM What is claimed is:
16. The amphiphilic molecule of claim 15, wherein at least one of said

hydrophobic moieties is selected from the group consisting of 1,2-distearoylglycerol, 1,2-dioleoylglycerol, ceramidophosphoric acid, O-acetyl-ceramidophosphoric acid, 1,2-dioleyl-3-dimethylaminopropanediol, 1,2-dimyristoyl-3-dimethylaminopropanediol, cholesterol, β-sitosterol, distearoyl **phosphatidic acid**, dioleylphosphatidic acid, a bisphosphatidyl glycerol, phosphatidylethanolamine and a phosphatidylinositol.

IT 83-46-5, β-Sitosterol 112-77-6, Oleoyl chloride 2442-61-7, 1,2-Dioleoylglycerol 7664-38-2D, Phosphoric acid, acetyl/ceramido derivs., reactions **14268-17-8 17966-25-5** 25322-68-3, Polyethyleneglycol 51063-97-9, 1,2-Distearoylglycerol 72719-84-7 127512-29-2
(amphiphilic materials and liposome formulations thereof)

=> d 2 clm

L6 ANSWER 2 OF 2 USPATFULL on STN
CLM What is claimed is:

1. An amphiphilic molecule comprising a hydrophilic component having at least a first and second terminus and at least a first and second hydrophobic moiety separately attached to, or proximal to, said first and second terminus of said hydrophilic component.

2. The amphiphilic molecule of claim 1, wherein said hydrophilic component is a hydrophilic polymer.

3. The amphiphilic molecule of claim 1, wherein said hydrophilic component is biocompatible.

4. The amphiphilic molecule of claim 1, wherein said hydrophilic component is a substantially linear, a branched, a pendant or a star hydrophilic component.

5. The amphiphilic molecule of claim 4, wherein said hydrophilic component is a substantially linear hydrophilic component.

6. The amphiphilic molecule of claim 4, wherein said hydrophilic component is a branched hydrophilic component.

7. The amphiphilic molecule of claim 1, wherein said hydrophilic component is a hydrophilic component from Table 1.

8. The amphiphilic molecule of claim 7, wherein said hydrophilic component is a polyethylene glycol.

9. The amphiphilic molecule of claim 8, wherein said hydrophilic component is a polyethylene glycol with an average molecular weight of between about 100 and about 100,000 daltons.

10. The amphiphilic molecule of claim 9, wherein said hydrophilic component is a polyethylene glycol with an average molecular weight of between about 100 and about 10,000 daltons.

11. The amphiphilic molecule of claim 1, wherein said hydrophobic moieties are between about 8 carbon atoms and about 26 carbon atoms in length.

12. The amphiphilic molecule of claim 11, wherein said hydrophobic moieties are between about 12 carbon atoms and about 20 carbon atoms in length.

13. The amphiphilic molecule of claim 1, wherein at least one of said

hydrophobic moieties is selected from the group consisting of a single, double, multiple, linear and branched chain hydrophobic moiety.

14. The amphiphilic molecule of claim 1, wherein at least one of said hydrophobic moieties is a hydrophobic moiety from Table 2.

15. The amphiphilic molecule of claim 1, wherein at least one of said hydrophobic moieties is selected from the group consisting of an alkylether, a perfluoro analog of an alkylether, a fattyester, a perfluoro analog of a fattyester, a dialkylglycerol, a perfluoro analog of a dialkylglycerol, an alkylamino, a perfluoro analog of an alkylamino, a dialkylamino, a perfluoro analog of a dialkylamino, a diacylglycerol, a perfluoro analog of a diacylglycerol, a sphingolipid, a perfluoro analog of a sphingolipid, a sterol, a perfluoro analog of a sterol, a phospholipid, a perfluoro analog of a phospholipid, a cholestanic acid derivative, a perfluoro analog of a cholestanic acid derivative, a derivative of a synthetic cationic lipid precursor and a perfluoro analog of a derivative of a synthetic cationic lipid precursor.

16. The amphiphilic molecule of claim 15, wherein at least one of said hydrophobic moieties is selected from the group consisting of 1,2-distearoylglycerol, 1,2-dioleoylglycerol, ceramidophosphoric acid, O-acetyl-ceramidophosphoric acid, 1,2-dioleyl-3-dimethylaminopropanediol, 1,2-dimyristoyl-3-dimethylaminopropanediol, cholesterol, β-sitosterol, distearoyl **phosphatidic acid**, dioleylphosphatidic acid, a bisphosphatidyl glycerol, phosphatidylethanolamine and a phosphatidylinositol.

17. The amphiphilic molecule of claim 1, wherein said hydrophilic component is attached to only two hydrophobic moieties.

18. The amphiphilic molecule of claim 1, wherein said amphiphilic molecule is an oligopodal amphiphilic molecule comprising a branched or star hydrophilic component to which a plurality of hydrophobic moieties are separately attached to each terminus or proximal thereto.

19. The amphiphilic molecule of claim 1, wherein said amphiphilic molecule is a polypodal amphiphilic molecule comprising a branched or star hydrophilic component that has a plurality of termini and a plurality of hydrophobic moieties separately attached to each terminus or proximal thereto.

20. The amphiphilic molecule of claim 19, wherein said hydrophilic component is attached to at least about ten hydrophobic moieties.

21. The amphiphilic molecule of claim 20, wherein said hydrophilic component is attached to between about ten and about twenty hydrophobic moieties.

22. The amphiphilic molecule of claim 19, wherein every terminus of said branched or star hydrophilic component is occupied by an attached hydrophobic moiety.

23. The amphiphilic molecule of claim 1, wherein at least two identical hydrophobic moieties are attached to said hydrophilic component.

24. The amphiphilic molecule of claim 1, wherein at least two non-identical hydrophobic moieties are attached to said hydrophilic component.

25. The amphiphilic molecule of claim 1, wherein amphiphilic molecule is a bipodal amphiphilic molecule comprising a substantially linear hydrophilic component that has a first and second terminus. and wherein

a first and second hydrophobic moiety are separately attached at or substantially at, said first and second terminus.

26. The amphiphilic molecule of claim 1, wherein said amphiphilic molecule is a tripodal amphiphilic molecule comprising a branched hydrophilic component that has at least three termini wherein a first, second and third hydrophobic moiety are separately attached at or proximal to, three of said at least three termini.

27. The amphiphilic molecule of claim 19, wherein at least about 50% of the termini of said branched or star hydrophilic component are separately occupied by an attached hydrophobic moiety.

28. The amphiphilic molecule of claim 18, wherein said hydrophilic component is attached to at least four hydrophobic moieties.

29. The amphiphilic molecule of claim 1, wherein at least one of said hydrophobic moieties is attached to said hydrophilic component via a covalent bond.

30. The amphiphilic molecule of claim 29, wherein at least two of the hydrophobic moieties attached to said hydrophilic component are attached via a covalent bond.

31. The amphiphilic molecule of claim 30, wherein each of the hydrophobic moieties attached to said hydrophilic component are attached via a covalent bond.

32. The amphiphilic molecule of claim 29, wherein at least one of said hydrophobic moieties is attached to said hydrophilic component via an alkylamine, alkylether, alkylammonium, carbamate, amide, ether, ester or phosphodiester bond.

33. The amphiphilic molecule of claim 32, wherein at least one of said hydrophobic moieties is attached to said hydrophilic component via an ester or phosphodiester bond.

34. The amphiphilic molecule of claim 29, wherein at least one of said hydrophobic moieties is attached to said hydrophilic component via a chemical linker.

35. The amphiphilic molecule of claim 29, wherein at least one of said hydrophobic moieties is attached to said hydrophilic component via a biologically releasable bond.

36. The amphiphilic molecule of claim 29, wherein said hydrophilic component is derivatized to introduce at least one functional group permitting the attachment of at least one of said hydrophobic moieties via a covalent bond.

37. The amphiphilic molecule of claim 36, wherein said hydrophilic component is derivatized to introduce at least one aldehyde, thiol, alkyl, dialkylamino, amino, carboxyl or polyol functional group.

38. The amphiphilic molecule of claim 1, wherein said hydrophilic component further comprises a selected agent attached at a site distinct from said first and second hydrophobic moieties.

39. A population of amphiphilic molecules in accordance with claim 1.

40. The amphiphilic molecule of claim 1, wherein said amphiphilic molecule forms a liquid-crystalline multimolecular aggregate upon contact of a number of said amphiphilic molecules with an aqueous solution.

41. The amphiphilic molecule of claim 1, wherein said amphiphilic molecule is formulated into a micelle, monolayer, bilayer, multimolecular aggregate, lipid microemulsion, oil globule, fat globule, wax globule or liposome.

42. The amphiphilic molecule of claim 1, in non-covalent association with at least one distinct amphiphilic, hydrophilic or hydrophobic molecule or population thereof.

43. The amphiphilic molecule of claim 42, wherein said amphiphilic molecule is formulated with at least one or more lipid components to form a liposome or lipid complex with at least one liposome bilayer.

44. The amphiphilic molecule of claim 43, wherein said amphiphilic molecule is formulated with at least one or more lipid components to form a liposome comprising at least an outer liposome bilayer, wherein the hydrophilic component of said amphiphilic molecule is in contact with at least a portion of said outer liposome bilayer and wherein the hydrophobic moieties of said amphiphilic molecule extend into said outer liposome bilayer.

45. The amphiphilic molecule of claim 44, wherein said amphiphilic molecule comprises a plurality of hydrophobic moieties that extend into the outer liposome bilayer and wherein said hydrophilic component extends in contact over a substantial portion of said outer liposome bilayer.

46. The amphiphilic molecule of claim 43, wherein said liposome further comprises at least one surface available antibody, binding ligand or antigen disposed in the liposome bilayer or tethered to a component of the liposome bilayer.

47. The amphiphilic molecule of claim 43, wherein said liposome further comprises an agent from Table 3A. Table 3B or Table 4.

48. The amphiphilic molecule of claim 43, wherein said liposome further comprises a selected pharmacological agent, an oxygen carrier, a nutrient, a coagulant, a nucleic acid molecule, a nucleic acid vector, an antisense nucleic acid, a ribozyme, a contrast agent or a pheromone.

49. The amphiphilic molecule of claim 48, wherein said amphiphilic molecule is formulated into a liposome that comprises a chemotherapeutic agent, an antibiotic, an anti-viral, a fungicide, an anaesthetic, an anti-inflammatory agent, an enzyme, a hormone, growth factor, a cytokine, a neurotransmitter, an immunogen or haemoglobin.

50. The amphiphilic molecule of claim 1, wherein said amphiphilic molecule is in functional association with a biological cell, thereby forming an amphiphile-coated biological cell, wherein the hydrophilic component of said amphiphilic molecule is in contact with at least a portion of the outer surface of the cell and wherein the hydrophobic moieties of said amphiphilic molecule extend into the outer membrane of the cell.

51. The amphiphilic molecule of claim 50, wherein said amphiphilic molecule is in functional association with a red blood cell, thereby forming an amphiphile-coated red blood cell.

52. An amphiphilic molecule comprising a hydrophilic component having covalently attached, at spatially distant sites, at least two hydrophobic moieties, said amphiphilic molecule forming a liquid-crystalline multimolecular aggregate upon contact of a number of said amphiphilic molecules with an aqueous solution, wherein the

mesophases of said liquid-crystalline multimolecular aggregates, as characterized by X-ray diffraction, include the fluid L.sub.α, gel L.sub.β, and hexagonal mesophases.

53. A method of making an amphiphilic molecule, comprising separately attaching at least a first and second hydrophobic moieties to, or proximal to, the first and second terminus of a hydrophilic component.

54. An amphiphilic molecule comprising a hydrophilic component having at least a first and second terminus and at least a first and second hydrophobic moiety separately attached to, or proximal to, said first and second terminus of said hydrophilic component; wherein said amphiphilic molecule forms a liquid-crystalline multimolecular aggregate upon contact of a number of said amphiphilic molecules with an aqueous solution, wherein the mesophases of said liquid-crystalline multimolecular aggregates, as characterized X-ray diffraction, include the fluid L.sub.α, gel L.sub.β, and hexagonal mesophases.

55. An amphiphilic molecule comprising a hydrophilic component having at least a first and second terminus and at least a first and second hydrophobic moiety separately attached to, or proximal to, said first and second terminus of said hydrophilic component; wherein said amphiphilic molecule forms a micellar or lamellar mesophase upon interaction of a number of said amphiphilic molecules with an aqueous medium.

56. An amphiphilic molecule comprising a hydrophilic component having at least a first and second terminus and at least a first and second hydrophobic moiety separately attached to, or proximal to, said first and second terminus of said hydrophilic component; wherein said first and second hydrophobic moieties are selected from Table 2.

57. The amphiphilic molecule of claim 1, wherein said amphiphilic molecule is formulated into a synthetic microreservoir.

=>

CLM What is claimed is:

1. A liposomal gel **composition** comprising an aqueous phospholipid **composition** which comprises: (a) 15-30 parts by weight of a phospholipid concentrate, consisting of (i) 70-80 parts by weight of phosphatidylcholine, (ii) 15-5 parts by weight of at least one acidic phospholipid selected from the group consisting of phosphatidylethanolamine, **phosphatidic acid**, N-acylphosphatidylethanolamine and mixtures thereof, (iii) 5-25 parts by weight of at least one other phospholipid selected from the group consisting of lysophosphatidylcholine, phosphatidylinositol and mixtures thereof, and (iv) 1-15 parts by weight of at least one phosphorus-free lipid per 100 parts by weight of (i), (ii) and (iii); (b) 20-14 parts by weight of at least one alcohol and (c) 50-71 parts by weight of an aqueous solution.

2. The liposomal gel **composition** according to claim 1, wherein the phospholipid concentrate consists of (i) 80 parts by weight of phosphatidylcholine, (ii) 5-15 parts by weight of at least one acidic phospholipid, (iii) 15-5 parts by weight of at least one other phospholipid, and (iv) 1-9 parts by weight of at least one phosphorus-free lipid per 100 parts by weight of (i), (ii) and (iii).

3. The liposomal gel **composition** according to claim 1 or 2 wherein the phosphorus-free lipid is selected from the group consisting of glycolipids, phytolipids and mixtures thereof.

4. The liposomal gel **composition** according to claim 1 or 2 wherein the alcohol is selected from the group consisting of ethanol, 1-propanol, 2-propanol and mixtures thereof.

5. The liposomal gel **composition** according to claim 1 or 2 wherein the liposomal gel comprises about 16 percent by weight of alcohol.

6. A topical pharmaceutical preparation comprising at least one liposomal gel **composition** according to claim 1 or 2, at least one biologically active substance selected from the group consisting of anti-inflammatories, anti-coagulants, antimycotics, spasmolytics, vasodilators and mixtures thereof, and at least one pharmaceutical excipient.

7. A topical pharmaceutical preparation comprising at least one liposomal gel **composition** according to claim 5, at least one biologically active substance selected from the group consisting of anti-inflammatories, anti-coagulants, antimycotics, spasmolytics, vasodilators and mixtures thereof, and at least one pharmaceutical excipient.

8. A topical cosmetic preparation comprising at least one liposomal gel **composition** according to claim 1 or 2, at least one cosmetic skin-care agent and at least one cosmetic excipient.

9. A topical cosmetic preparation comprising at least one liposomal gel **composition** according to claim 5, at least one cosmetic skin-care agent and at least one cosmetic excipient.

ACCESSION NUMBER: 1998:9199 USPATFULL

TITLE: Alcoholic aqueous gel-type phospholipid **composition**, its use and topical preparation containing it

INVENTOR(S): Ghyczy, Miklos, Koln, Germany, Federal Republic of
Roding, Joachim, Wiesbaden, Germany, Federal Republic of

Lautenschlager, Hans, Pulheim, Germany, Federal Republic of
Hameister, Walter, Pulheim, Germany, Federal Republic of
Hager, Jorg, Koln, Germany, Federal Republic of
PATENT ASSIGNEE(S): A. Natterman & Cie. GmbH, Cologne, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5711965		19980127
APPLICATION INFO.:	US 1996-604355		19960221 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1994-340457, filed on 14 Nov 1994, now abandoned which is a continuation of Ser. No. US 1992-917052, filed on 7 Aug 1992, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1990-4003782	19900208
	DE 1990-4003783	19900208

DOCUMENT TYPE: Utility

to a lipid to form a lipomelanin. The structure is not clearly understood, largely due to the lack of information about the synthesis and structure of melanins. As used herein, "lipomelanins" refers to the novel compounds of the present invention, comprising one or more lipids (as hereinafter more fully described) bonded to one or more melanins. As used herein, "lipomelanin sunscreen" comprises a lipomelanin bonded to an ultra-violet-light absorbing compound.

SUMM Additionally, the sunscreen and pigmentation aspects of the present invention make it suitable for use as a **hair** dye **composition**. The lipomelanin **composition** can be applied to the **hair** to provide increased pigmentation.

DETD The textural characteristics of the lipomelanin sunscreen of the present invention make it suitable for application directly onto the skin. The lipid component of the lipomelanin promotes absorption of the **composition** by the skin. In addition, the lipomelanin of the present invention is creamy and smooth at physiological pH, and suitable for topical application.

DETD A lipomelanin of the present invention may be combined with other ingredients to form a sunscreen **composition**. These ingredients may include substances typically found within creams, oils, ointments and lotions applied to the skin. Further, the added ingredients may function simply as diluents, or may optionally function to integrate additional utility into the **composition**. Coloring agents that may impart some additional ultra-violet-light protective value may also be added such as zinc oxide or titanium dioxide. Non-limiting examples of suitable ingredients for incorporation into such a **composition** include oils, such as mineral oil, jojoba oil and mink oil, emollients, vitamins, fragrances, dyes, colouring agents, pigments, water and any other ingredients typically added to skin-care **compositions**.

DETD The lipomelanin/paba sunscreen prepared according to Example 3 is creamy and smooth for use in accordance with the sunscreen **compositions** of the present invention. It is more soluble in water at neutral pH than melanins alone, and soluble for use in accordance with the sunscreens of the present invention. Absorption properties of the lipomelanin/paba in the range of short wavelength UVB is high, as indicated in FIG. 4.

CLM What is claimed is:

2. The sunscreen of claim 1, wherein the unsaturated lipid is selected from the group consisting of triglycerides, diglycerides, monoglycerides, esters of fatty acids, lecithins, cephalins, phosphatidyl ethanolamine, phosphatidyl dimethylethanolamine, phosphatidyl monomethylethanolamine, phosphastidyl inositol, phosphatidyl serine, **phosphatidic acid**, arachidonic acid, oleic acid, linoleic acid, linolenic acid, or a combination of one or more of the same.

ACCESSION NUMBER:	1998:51179 USPATFULL
TITLE:	33 Lipomelanin sunscreen **composition**
INVENTOR(S):	Menon, I. Aravindakshan, North York, Canada Haberman, Herbert F., Toronto, Canada
PATENT ASSIGNEE(S):	DUSA Pharmaceuticals, Inc., Ontario, Canada (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5750093		19980512
APPLICATION INFO.:	US 1997-882697		19970625 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1993-54271, filed on 30 Apr 1993, now patented, Pat. No. US 5643554, issued on 1 Jul 1997		

L6 ANSWER 38 OF 47 USPATFULL on STN

SUMM Nanoemulsions comprising oil globules having a mean size of less than 100 nm have already been used in order to obtain transparent **compositions** having an appearance similar to water and resulting, after application to the skin, in a feel similar to that of a cream or milk. These nanoemulsions, in contrast to microemulsions, are true emulsions where the oil globules are dispersed in an aqueous phase, the surfactants being situated at the oil/aqueous phase interface. The transparency of these emulsions arises from the small size of the oily globules, which small size is obtained by virtue of passing through a high- pressure homogenizer.

SUMM Nanoemulsions comprising an amphiphilic lipid phase composed of phosphoglycerides, water and oil are known. These emulsions have the disadvantage of being unstable on storage at conventional storage temperatures, namely between 0° and 45° C. They result in yellow **compositions** and produce a rancid smell which develops after a few days of storage. They are described in EP 406 162.

SUMM Nanoemulsions comprising the combination of a long-chain fatty alcohol and/or of a long-chain fatty acid and of a soap type surfactant of a long-chain fatty acid forming a gel, the phase transition temperature of which is greater than 60° C., are also known. These emulsions are prepared at temperatures greater than 70° C. which limit the use of heat-sensitive active principles in such **compositions**. They are described, for example, in EP-A-615,741.

SUMM Further subjects of the invention are a **composition** for topical use such as a cosmetic or dermopharmaceutical **composition**, characterized in that it is composed of an emulsion as defined above, and the use of the same on the skin, **hair**, eyes, face, etc.

DETD In addition to the specific examples of various components of the invention nanoemulsions given above, those compounds and **compositions** meeting the functional requirements of the invention components listed in Volumes 1 and 2 of the International Cosmetic Ingredient Dictionary, 6th Ed., 1995, J. A. Wenninger, et al, Eds., published by the Cosmetic, Toiletry and Fragrance Association, incorporated herein by reference, are also to be included. Moreover, each invention component may be a mixture of acceptable compounds or **compositions**.

CLM What is claimed is:

6. The nanoemulsion according to claim 4 wherein the at least one ionic amphiphilic lipid is selected from the group consisting of: alkaline salts of dicetyl and dimyristyl phosphate; alkaline salts of cholesterol sulphate; alkaline salts of cholesterol phosphate; salts of amino acids containing fatty groups; sodium salts of **phosphatidic acid**; phospholipids; and alkylsulphonic derivatives of formula: ##STR2## in which R represents C.sub.16 -C.sub.22 alkyl radicals, taken as a mixture or separately, and M is an alkali metal.

15. The nanoemulsion according to claim 11, said nanoemulsion comprising at least 15% by weight of said lower alcohol with respect to the total weight of the **composition**.

21. A **composition** for topical use comprising the nanoemulsion according to claim 1.

ACCESSION NUMBER: 1998:54496 USPATFULL

TITLE: Transparent nanoemulsion less than 100 NM based on fluid non-ionic amphiphilic lipids and use in cosmetic or in dermopharmaceuticals

INVENTOR(S): Ribier, deceased, Alain, late of Paris, France by

Roger Ribier, legal representative
Simonnet, Jean-Thierry, Paris, France
Legret, Sylvie, Chatillon, France
PATENT ASSIGNEE(S): L'Oreal, Paris, France (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5753241		19980519	
APPLICATION INFO.:	US 1996-607353		19960226	(8)

	NUMBER	DATE
PRIORITY INFORMATION:	FR 1995-2268	19950227

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted

15. A method of obtaining a **composition** with anti-apoptotic activity comprising the steps of: (a) combining an amount of: (i) **phosphatidic acid** (PA), (ii) phosphatidylinositol (PI), (iii) lysophosphatidic acid (LPA), (iv) lysophosphatidylinositol (LPI), and (v) lysophosphatidylcholine (LPC) effective to produce a ratio of from. about 2:8:6:2:2 to 15:15:10:4:8 with anti-apoptotic activity in a physiologically acceptable buffer; and (b) sonicating the phospholipid/buffer mixture.

22. The method according to claim 15, wherein the sonication occurs such that the temperature of the **composition** does not exceed 60° C.

25. A **composition** obtained according to the method of claim 15, 19 or 21.

26. A method of treatment of apoptosis, comprising administering a therapeutically effective amount of a pharmaceutically acceptable **composition** comprising the **composition** according to claim 25 to a patient in need of such treatment.

35. A **composition** comprising a tissue culture media and an effective amount of a **composition** according to claim 25.

36. The method of preventing apoptosis in cultured cells comprising treating cells with a **composition** according to claim 35.

41. A method of organ preservation comprising adding an effective amount of the **composition** of claim 25 to the solution in which the organ is stored.

42. A method of organ preservation comprising administering to the host animal at least one intravenous bolus of an effective amount of the **composition** of claim 25.

43. A method of treating dermatologic conditions in which apoptosis is implicated, comprising topically administering a therapeutically effective amount of a pharmaceutically acceptable **composition** comprising the **composition** according to claim 25 to a patient in need of such treatment.

44. The method according to claim 43, wherein the dermatological condition is wrinkling, sagging, psoriasis, baldness or **hair** loss.

45. The method according to claim 44, wherein the **composition** of claim 25 is in a cream or ointment or gel.

46. A method of treating wounds comprising administering an effective amount of the **composition** of claim 25.

ACCESSION NUMBER: 1999:166620 USPATFULL
TITLE: **Compositions** which inhibit apoptosis, methods of making the **compositions** and uses thereof
INVENTOR(S): Bathurst, Ian C., Kensington, CA, United States
Foehr, Matthew W., San Francisco, CA, United States
Goddard, John G., San Francisco, CA, United States
Tomei, L. David, Richmond, CA, United States
Barr, Philip J., Oakland, CA, United States
PATENT ASSIGNEE(S): LXR Biotechnology, Inc., Richmond, CA, United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION:	US 6004579	19991221	
	WO 9709989	19970320	
APPLICATION INFO.:	US 1997-704732	19970904	(8)
	WO 1996-US14752	19960913	
		19970904	PCT 371 date
		19970904	PCT 102(e) date
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		

L5 ANSWER 4 OF 5 USPATFULL on STN

CLM What is claimed is:

1. A liposomal **composition** for **topical** application to the **skin**, resulting in enhanced transdermal passage through or introduction of an active ingredient into the **skin**, which **composition** comprises from 0.5% to 10% phospholipids, from 5% to 35% of a C.sub.3 or C.sub.4 alcohol, 151 to 30% ethanol, wherein the combined content of ethanol and C.sub.3 or C.sub.4 alcohol is at least 20 wt. % and not more than 40 wt. %, up to 20 wt. % glycol, at least 20% water and at least one active ingredient.

2. A **composition** according to claim 1, where the phospholipids comprise at least one member selected from the group consisting of phosphatidylcholine (P C), hydrogenated P C, **phosphatidic acid** (P A), phosphatidylserine (P S), phosphatidylethanolamine (P E), phosphatidylglycerol (P P G) and phosphatidylinositol (P I).

3. A **composition** according to claim 1, where the C.sub.3 alcohol is isopropanol and where the glycol is propylene glycol.

4. A **composition** according to claim 1, wherein the active ingredient is at least one member selected from the group consisting of peptides, enzymes, hormones, anti-aging agents, tanning agents, vitamins, melanin, melatonin, antiviral drags, plant extracts, glycosides, alkaloids, anxiolytics, antiepileptics, antifundals, non-steroidal anti-inflammatory drugs, antihypertensive agents, corticosteroids, minoxidil, cannabinoids, antibiotics, hydroxy acids, antimitotics, antimycotics, retinoic acid, diclofenac and acyclovir.

5. A process for the production of a cosmetic or medical **composition** for **topical** application to the **skin**, for rapidly introducing into the **skin**, or for enhanced penetration through the **skin**, wherein said process comprises: mixing from 0.5% to 10% phospholipids, from 5% to 35% of a C.sub.3 or C.sub.4 alcohol, 15% to 30% ethanol, C.sub.3 or C.sub.4 alcohol is at least 20 wt. % and not more than 40 wt. %, up to 20 wt. % glycol, at least 20% water and at least one active ingredient, and forming a colloid system containing vesicles.

ACCESSION NUMBER:	1998:14498 USPATFULL
TITLE:	**Composition** for applying active substances to or through the skin
INVENTOR(S):	Touitou, Elka, Jerusalem, Israel
PATENT ASSIGNEE(S):	Yissum Research Development Company of The Hebrew University of Jerusalem, Jerusalem, Israel (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5716638		19980210
APPLICATION INFO.:	US 1995-563144		19951127 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1994-264204, filed on 22 Jun 1994, now patented, Pat. No. US 5540934		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Kishore, Gollamudi S.		
LEGAL REPRESENTATIVE:	Evenson, McKeown, Edwards & Lenahan, PLLC		
NUMBER OF CLAIMS:	5		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 2 Drawing Page(s)		
LINE COUNT:	1362		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 5 OF 5 USPATFULL on STN

CLM What is claimed is:

1. A salt of a non-steroidal anti-inflammatory, analgesic and/or antipyretic substance (NSA) and a **phosphatidic acid**, said salt having the formula [NSA].sub.x [PA].sub.y wherein NSA represents a cation derived from said non-steroidal, anti-inflammatory, analgesic and/or antipyretic substance; PA represents a **phosphatidic acid** or a mixture of different **phosphatidic acids**, each of said **phosphatidic acid** or **phosphatidic acids** having the formula ##STR2## wherein R.sub.1 and R.sub.2, which may be the same or different, each represents a C.sub.n alkyl group, a C.sub.n alkenyl group, or a C.sub.n alkadienyl group wherein n is an integer from 10 to 24; and x and y are in a stoichiometric ratio of 1:1.

2. A pharmaceutical **composition** comprising a salt according to claim 1 and a pharmaceutically acceptable excipient.

3. A sustained release pharmaceutical dosage form capable of releasing an NSA over a period of time, comprising as a pharmaceutically active substance a salt according to claim 1.

4. A method for the treatment of inflammatory conditions of the **skin** or joints in a patient which comprises administering to the patient an effective amount of a salt according to claim 1.

5. A salt according to claim 1 wherein the NSA is 2-((2,6-dichloro-phenyl)amino)-benzene-acetic acid (diclofenac) or (4-hydroxy-2-methyl-N-2-pyrydinyl-2H-1,2benzothiazine-3-carboxamide 1,1-dioxide (piroxicam).

6. A salt according to claim 1 wherein n is from 15 to 24.

7. A salt according to claim 6 wherein n is 15 or 17.

8. A salt according to claim 1 wherein NSA is a cation derived from 2-((2,6-dichloro-phenyl)amino)benzene-acetic acid (diclofenac) or (4-hydroxy-2-methyl-N-2-pyrydinyl-2H-1,2-benzothiazine-3-carboxamide 1,1-dioxide (piroxicam).

9. A pharmaceutical **composition** according to claim 2 wherein said excipient comprises an unsaturated vegetable oil.

10. A sustained release pharmaceutical dosage form as claimed in claim 3, adapted to release the pharmaceutically active substance trans-cutaneously.

11. A sustained release pharmaceutical dosage form according to claim 10 in the form of a cutaneous patch, plaster or bandage.

ACCESSION NUMBER: 96:5834 USPATFULL

TITLE: Derivatives of non-steroidal anti-inflammatory, analgesic and/or antipyretic substances, their use and pharmaceutical formulations containing them

INVENTOR(S): Bombardelli, Ezio, Milan, Italy

PATENT ASSIGNEE(S): Indena S.p.A., Italy (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5484833		19960116
APPLICATION INFO.:	US 1992-922636		19920730 (7)

	NUMBER	DATE

PRIORITY INFORMATION: GB 1992-12450 19920611
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Page, Thurman K.
ASSISTANT EXAMINER: Levy, Neil
LEGAL REPRESENTATIVE: Kirschstein et al.
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
LINE COUNT: 329
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L11 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:136978 CAPLUS
DN 134:183282
ED Entered STN: 25 Feb 2001
TI **Hair** growth stimulants containing lysophosphatidic acids and/or phosphatidic acids
IN Takahashi, Tomoya; Kamimura, Ayako; Matsuoka, Takako
PA Kyowa Hakko Kogyo Co., Ltd., Japan
SO PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM A61K007-06
CC 62-3 (Essential Oils and Cosmetics)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001012141	A1	20010222	WO 2000-JP5542	20000818
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1214928	A1	20020619	EP 2000-953498	20000818
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
PRAI JP 1999-231144	A	19990818		
JP 2000-137711	A	20000510		
WO 2000-JP5542	W	20000818		

OS MARPAT 134:183282
AB **Hair** growth stimulants characterized by containing as the active ingredient at least one member selected from among lysophosphatidic acids and phosphatidic acids the fatty acid group moiety of which consists exclusively of fatty acid groups having even-numbered and linear carbon chains. A **hair** growth stimulant composition containing monopalmitoyllysophosphatidic acid 0.3, grape-derived proanthocyanidin 3, ethanol 70, 1,3-butylene glycol 3, N-acetylglutamineisostearate 0.25, polyoxyethylene(25)glyceryl pyroglutamic acid diisostearate ester 0.25 % was prepared and tested for its **hair** growth-stimulating effect.
ST **hair** growth stimulant lysophosphatidic acid ester; phosphatidic acid ester **hair** growth stimulant
IT Phosphatidic acids
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(esters; **hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters)
IT **Hair** preparations
(growth stimulants; **hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters)
IT Lysophosphatidic acids
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters)
IT Proanthocyanidins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters and proanthocyanidins)

IT Tocopherols
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters and tocopherols)

IT **14268-17-8**, Dioleoyl phosphatidic acid 22002-85-3, 1-Palmitoyllysophosphatidic acid **79806-85-2**, Dilauroyl phosphatidic acid
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters)

IT 20315-25-7, Proanthocyanidin B1 23567-23-9, Proanthocyanidin B3 29106-49-8, Proanthocyanidin B2 37064-30-5, Proanthocyanidin c1
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters and proanthocyanidins)

IT 1404-26-8, Polymyxin B 1935-18-8, Palmitoyl-carnitine 58066-85-6, Hexadecylphosphocholine 121263-19-2, Calphostin C
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters and protein kinase C inhibitors)

IT 58-95-7, d-α-Tocopherol acetate 59-02-9, d-α-Tocopherol 2074-53-5, dl-α-Tocopherol 51898-34-1, dl-α-Tocopherol nicotinate 52225-20-4, dl-α-Tocopherol acetate
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters and tocopherols)

IT 141436-78-4, Protein kinase C
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(inhibitor; **hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters and protein kinase C inhibitors)

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Kastell; JP 57165309 A CAPLUS
(2) Kastell; EP 60933 A CAPLUS
(3) Kastell; US 4515778 A 1985 CAPLUS
(4) Kyowa Hakko Kogyo Co Ltd; JP 09315947 A CAPLUS
(5) Kyowa Hakko Kogyo Co Ltd; EP 768079 A CAPLUS
(6) Kyowa Hakko Kogyo Co Ltd; WO 9600561 A 1996 CAPLUS
(7) Kyowa Hakko Kogyo Co Ltd; EP 797978 A 1997 CAPLUS
(8) Lang; DE 4113346 A 1992 CAPLUS
(9) Lion Corporation; JP 5927809 A
(10) Lion Corporation; EP 102534 A 1984 CAPLUS

L12 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN
AN **1997:655388** CAPLUS
DN 127:298525
TI Hair growth compositions comprising a specific inhibitor of protein kinase C
IN Takahashi, Tomoya; Yokoo, Yoshiharu; Kamiya, Toshikazu; Shirai, Akio; Tamaoki, Tatsuya
PA Kyowa Hakko Kogyo Co., Ltd., Japan
SO Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 797978	A2	19971001	EP 1997-105023	19970325
	EP 797978	A3	19971029		
	EP 797978	B1	20030917		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 09315947	A2	19971209	JP 1997-59404	19970313
	CA 2200826	AA	19970929	CA 1997-2200826	19970324
	CA 2200826	C	20040210		
	US 6506370	B1	20030114	US 1997-826072	19970324
	AT 249808	E	20031015	AT 1997-105023	19970325
	TW 464507	B	20011121	TW 1997-86103848	19970326
	AU 9716611	A1	19971002	AU 1997-16611	19970327
	AU 718309	B2	20000413		
	US 2003086885	A1	20030508	US 2002-309047	20021204
PRAI	JP 1996-75903	A	19960329		
	US 1997-826072	A1	19970324		

AB A safe and effective hair-growing agent composition a protein kinase C-specific inhibitor such as polymyxin B is described. Thus, a hair tonic contained EtOH 55, 1,3-butylene glycol 7, N-acetylglutamine isostearyl ester 0.5, and PEG glyceryl pyroglutamate isostearate diester 0.25. To this was added a solution of 0.3 g polymyxin B sulfate in 36.95 g water. The hair-growth promoting activity of this composition was demonstrated mouse hair-follicle cell cultures.

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phosphatidic acid esters and tocopherols)

IT **14268-17-8**, Dioleoyl phosphatidic acid 22002-85-3, 1-Palmitoyllysophosphatidic acid **79806-85-2**, Dilauroyl phosphatidic acid
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**hair** growth stimulants containing lysophosphatidic acid and/or phosphatidic acid esters)

L7 ANSWER 1 OF 56 USPATFULL on STN

AB Probes comprising an immobilised **Phosphatidic Acid** attached onto a solid support are described, for example, as shown in formula I and V: (a) the linker consists of aryl, heteroaryl, alkyl with possible heteroatoms and/or unsaturations, preferably chains of (CH2)n, with n=8-20, most preferably n=11; (b) the heteroatom X maybe O, S, or most preferably NH; (c) the functional group (FG) is a carbonyl from a carboxylate (thiolo)ester, or, most preferably an amide; (d) the R-substituent carries an aryl, alkyl group, or a combination, preferably R=CmH2m+1, m=8-20, m=16 optimal; (e) the ion M represents any cation, preferably Na+, NH4+; (f) unsaturations are allowed, such as in an arachidonyl side chain and (g) =solid support with attachment to functional group, where: R=aryl, alkyl group, or a combination, preferably R=CmH2m+1, m=8-20, m=16 is optimal. R3 is P(O) (OM)2; R5=H(PI(3)P); R3=H; R4=P(O)(OM)2; R5=H(PI(4)P); R3=H; R4=H; R5=P(O)(OM)2(PI(5)P); R3=P(O)(OM)2; R4=P(O)(OM)2; R5=H(PI(3,4)P2); R3=P(O)(OM)2; R4=H; R5=P(O)(OM)2(PI(3,5)P2); R3=H; R4=P(O)(OM)2; R5P=P(O)(OM)2(PI(4,5)P2); or R3=P(O)(OM)2; R4=P(O)(OM)2; R5=H(O)(OM)2(PI(3,4,5)P3). M=any cation, preferably Na+, NH4+ *Denotes a stereogenic center. More preferably a stereogenic centre with an R absolute configuration. Linker=aryl, heteroaryl, alkyl with possible heteroatoms and/or unsaturations. Preferably chains of (CH2)n with n=8-20, most preferably n=11. X=O, S, or, most preferably NH. FG=Carbonyl from a carboxylate, thiolo(ester), or, most preferably an amide. Unsaturations are allowed, such as in an arachidonyl side chain.=solid support with attachment to functional group. Use of the probes to identify **Phosphatidic Acid** binding protein or phosphoinositide binding proteins is also described.

PI US 2004072244 A1 20040415

L7 ANSWER 2 OF 56 USPATFULL on STN

AB There is disclosed a method for preventing tissue injury caused by tissue hypoxia and reoxygenation, comprising administering a compound that inhibits signal transduction by inhibiting cellular accumulation of linoleoyl **phosphatidic acid** (PA) through an inhibition of the enzyme LPAAT (lysophosphatidic acyltransferase).

PI US 2003216414 A1 20031120

L7 ANSWER 3 OF 56 USPATFULL on STN

AB There is disclosed a method for preventing tissue injury caused by tissue hypoxia and reoxygenation, comprising administering a compound that inhibits signal transduction by inhibiting cellular accumulation of linoleoyl **phosphatidic acid** (PA) through an inhibition of the enzyme LPAAT (lysophosphatidic acyltransferase).

PI US 6638938 B1 20031028

L7 ANSWER 4 OF 56 USPATFULL on STN

AB This invention describes novel catalytically active cytosolic enzymes for triacylglycerol biosynthesis from eukaryotic systems. The complex from oleaginous yeast was enzymatically characterized, and was found to contain lysophosphatidic acid acyltransferase, **phosphatidic acid** phosphatase, diacylglycerol acyltransferase, acyl-acyl carrier protein synthetase, superoxide dismutase and acyl carrier protein. The triacylglycerol biosynthetic machinery rapidly incorporates free fatty acids as well as fatty acyl-coenzyme A into triacylglycerol and its biosynthetic intermediates. Lysophosphatidic acid acyltransferase, **phosphatidic acid** phosphatase and diacylglycerol acyltransferase from the complex were microsequenced. Acyl carrier protein, superoxide dismutase and diacylglycerol acyltransferase genes were cloned and expressed in bacterial system. The soluble triacylglycerol biosynthetic enzymes (lysophosphatidic acid

acyltransferase, **phosphatidic acid** phosphatase, diacylglycerol acyltransferase) in yeast, rat adipocytes and human hepatocyte cell-line (HepG2) exist in the cytosol either as free enzymes or as a multienzyme complex.

PI US 2003157513 A1 20030821

L7 ANSWER 5 OF 56 USPATFULL on STN

AB There is disclosed cDNA sequences and polypeptides having the enzyme CDP-diacylglycerol synthase (CDS) activity. CDS is also known as CTP:phosphatidate cytidylyltransferase. There is further disclosed methods for isolation and production of polypeptides involved in **phosphatidic acid** metabolism and signaling in mammalian cells, in particular, the production of purified forms of CDS.

PI US 6503700 B1 20030107

L7 ANSWER 6 OF 56 USPATFULL on STN

AB By this invention, novel nucleic acid sequences encoding for **phosphatidic acid** phosphatase (PAP) proteins are provided, wherein PAP protein is active in the formation of diacylglycerol from **phosphatidic acid**. Also considered are amino acid and nucleic acid sequences obtainable from PAP nucleic acid sequences and the use of such sequences to provide transgenic host cells capable of producing altered lipid compositions and total lipid levels.

PI US 6495739 B1 20021217

L7 ANSWER 7 OF 56 USPATFULL on STN

AB The present invention provides a hair-growing agent comprising, as an active ingredient, a **phosphatidic acid** represented by formula (I): ##STR1##

(wherein R.sup.1 represents alkyl, alkenyl, alkanoyl or alkenoyl; and when R.sup.1 represents alkyl or alkenyl, R.sup.2 represents alkyl, alkenyl, alkanoyl or alkenoyl, and when R.sup.1 represents alkanoyl or alkenoyl, R.sup.2 represents alkyl or alkenyl).

PI US 2002172657 A1 20021121
US 6562804 B2 20030513

L7 ANSWER 8 OF 56 USPATFULL on STN

AB There is disclosed cDNA sequences and polypeptides having the enzyme CDP-diacylglycerol synthase (CDS) activity. CDS is also known as CTP:phosphatidate cytidylyltransferase. There is further disclosed methods for isolation and production of polypeptides involved in **phosphatidic acid** metabolism and signaling in mammalian cells, in particular, the production of purified forms of CDS.

PI US 2002168747 A1 20021114

L7 ANSWER 9 OF 56 USPATFULL on STN

AB Novel, heterocyclic compounds having at least one ring nitrogen, disclosed side chains and, in some embodiments, an oxygen ortho to the ring nitrogen inhibit inflammatory responses associated with TNF-α and fibroblast proliferation in vivo and in vitro. The compounds of the invention neither appreciably inhibit the activity of cAMP phosphodiesterase nor the hydrolysis of **phosphatidic acid**, and are neither cytotoxic nor cytostatic. Preferred compounds of the invention are esters. Methods for the use of the novel compounds to inhibit ceramide-mediated intracellular responses in stimuli in vivo (particularly TN-α) are also described. The methods are expected to be of use in reducing inflammatory responses (for example, after angioplasty), in limiting fibrosis (for example, of the liver in cirrhosis), in inhibiting cell senescence, cell apoptosis and UV induced cutaneous immune suppression. Compounds having enhanced water solubility are also described.

PI US 2002165202 A1 20021107

US 6562819 B2 20030513

L7 ANSWER 10 OF 56 USPATFULL on STN
AB By this invention, novel nucleic acid sequences encoding for **phosphatidic acid** phosphatase (PAP) proteins are provided, wherein said PAP protein is active in the formation of diacylglycerol from **phosphatidic acid**. Also considered are amino acid and nucleic acid sequences obtainable from PAP nucleic acid sequences and the use of such sequences to provide transgenic host cells capable of producing altered lipid compositions and total lipid levels.
PI US 6476294 B1 20021105

L7 ANSWER 11 OF 56 USPATFULL on STN
AB The present invention provides a hair-growing agent comprising, as an active ingredient, a **phosphatidic acid** represented by formula (I): ##STR1##

(wherein R.sup.1 represents straight-chain alkyl having an odd number of carbon atoms, straight-chain alkenyl having an odd number of carbon atoms, or straight-chain alkynyl having an odd number of carbon atoms).
PI US 2002155085 A1 20021024
US 6562803 B2 20030513

L7 ANSWER 12 OF 56 USPATFULL on STN
AB An anti-depressant, mental & emotional stress suppressor and mood improver having a prominent action for decreasing blood cortisol level and serotonin reuptake and has an effect of alleviating symptoms associated with depression and mental & emotional stress of a subject administered with the improver. The improver contains as the effective ingredient a combination of phosphatidy-L-serine and **phosphatidic acid**, or the salts thereof, comprising at least 20% (w/w) phosphatidy-L-serine and typically within the range of about 20%-40% of phosphatidy-L-serine, out of the total phospholipid content of the composition and at least 3% (w/w) of **phosphatidic acid**, preferably above about 10% and typically within the range of about 20%-40% of **phosphatidic acid**, out of the total phospholipid content of the composition. The phosphatidyl-L-serine and **phosphatidic acid** has a structural fatty acid chain derived from at least one raw material lecithin selected from the group consisting of soy bean lecithin, rapeseed lecithin or egg yolk lecithin. Using the raw material lecithin as the substrate, phosphatidyl-L-serine and **phosphatidic acid** can be produced by enzymatic conversion utilizing phospholipase-D.
PI US 2002072508 A1 20020613
US 6410522 B2 20020625

L7 ANSWER 13 OF 56 USPATFULL on STN
AB A lipid preparation comprising at least about 10% **phosphatidic acid** (PA) is used to treat human conditions or disease. Examples of such conditions or disease are withdrawal syndromes or cancer.
PI US 6358937 B1 20020319

L7 ANSWER 14 OF 56 USPATFULL on STN
AB The present invention relates to a nanoemulsion, the oil globules of which have an average size of less than 100 nm, comprising (1) a surfactant which is solid at a temperature of less than or equal to 45° C., which surfactant is chosen from sorbitan fatty esters and oxyethylenated sorbitan fatty esters, (2) at least one oil having a molecular weight of greater than 400 and (3) at least one ionic amphiphilic lipid chosen from the group formed by the alkaline salts of dicetyl and dimyristyl phosphate, the alkaline salts of cholesterol sulphate, the alkaline salts of cholesterol phosphate, lipoamino acids, the sodium salts of **phosphatidic acid**, cationic

amphiphilic lipids and alkylsulfonic derivatives, the ratio by weight of the amount of oily phase to the amount of surfactant ranging from 2 to 10. The surfactant used is, for example, chosen from sorbitan monostearate, sorbitan monopalmitate and sorbitan 20 EO tristearate. The emulsion obtained is transparent and stable on storage. It can comprise large amounts of oil while retaining good transparency and while having good cosmetic properties. The invention also relates to the use of the nanoemulsion according to the invention in the cosmetics and dermatological fields, in particular for moisturizing the skin and/or mucous membranes, as well as for treating the hair, and in the ophthalmological field, as an eye lotion for treating the eyes.

PI US 6335022 B1 20020101

L7 ANSWER 15 OF 56 USPATFULL on STN

AB Novel, heterocyclic compounds having at least one ring nitrogen, disclosed side chains and, in some embodiments, an oxygen ortho to the ring nitrogen inhibit inflammatory responses associated with TNF-α and fibroblast proliferation in vivo and in vitro. The compounds of the invention neither appreciably inhibit the activity of cAMP phosphodiesterase nor the hydrolysis of **phosphatidic acid**, and are neither cytotoxic nor cytostatic. Preferred compounds of the invention are esters. Methods for the use of the novel compounds to inhibit ceramide-mediated intracellular responses in stimuli in vivo (particularly TN-α) are also described. The methods are expected to be of use in reducing inflammatory responses (for example, after angioplasty), in limiting fibrosis (for example, of the liver in cirrhosis), in inhibiting cell senescence, cell apoptosis and UV induced cutaneous immune suppression. Compounds having enhanced water solubility are also described.

PI US 6323201 B1 20011127

L7 ANSWER 16 OF 56 USPATFULL on STN

AB A method of treating an individual with an immune system with decreased activity by administering an effective amount of a lipid preparation derived from a natural source and enriched to contain at least 10% (w/w) **phosphatidic acid** (PA) is disclosed.

PI US 6288047 B1 20010911
WO 9903479 19990128

L7 ANSWER 17 OF 56 USPATFULL on STN

AB Diacylglycerol (DAG) plays a central role in both the synthesis of complex lipids and in intracellular signaling; diacylglycerol kinase (DGK) catalyzes the phosphorylation of DAG, which yields **phosphatidic acid**. A family of DGKs has been identified in multicellular organisms over the past few years, but the physiological function(s) of this diversity is not clear. One clue has come from the Drosophila DGK2, rdgA, since mutations in this gene cause retinal degeneration. The present invention relates to a novel DGK, designated DGKι, which was isolated from human retina and brain libraries. DGKι contains two cysteine-rich repeats, a region similar to the phosphorylation site domain of MARCKS, a conserved catalytic domain, and four ankyrin repeats at its C-terminus. By primary structure, DGKι is most similar to human DGKζ and Drosophila rdgA. A>12 kb mRNA for DGKι was detected only in brain and retina among the tissues examined. In cells transfected with the DGKι cDNA, an approximately 130 kDa protein was detected by immunoassay, and activity assays demonstrated that it encodes a functional DAG kinase. The protein was found to be in both the cytoplasm and nucleus, with this localization controlled by PKC isoforms α and γ. The gene encoding DGKι was localized to human chromosome 7q32.3-33, which is known to be a locus for an inherited form of retinitis pigmentosa. These results have defined a novel isoform of DAG kinase, which may have important cellular functions in the retina and brain.

PI US 6255095 B1 20010703

L7 ANSWER 18 OF 56 USPATFULL on STN
AB There is disclosed cDNA sequences and polypeptides having the enzyme CDP-diacylglycerol synthase (CDS) activity. CDS is also known as CTP:phosphatidate cytidylyltransferase. There is further disclosed methods for isolation and production of polypeptides involved in **phosphatidic acid** metabolism and signaling in mammalian cells, in particular, the production of purified forms of CDS.
PI US 6200769 B1 20010313

L7 ANSWER 19 OF 56 USPATFULL on STN
AB There is disclosed cDNA sequences and polypeptides having the enzyme CDP-diacylglycerol synthase (CDS) activity. CDS is also known as CTP:phosphatidate cytidylytransferase. There is further disclosed methods for isolation and production of polypeptides involved in **phosphatidic acid** metabolism and signaling in mammalian cells, in particular, the production of purified forms of CDS.
PI US 5952480 19990914

L7 ANSWER 20 OF 56 USPATFULL on STN
AB There is disclosed a method for:

(1) inhibiting new blood vessel formation that is useful for treating or preventing progression of diabetic retinopathy, cavernous haemangiomas, Kaposi's sarcoma, tumors composed of endothelial-like cells, and growth of cancer cells by preventing their development of a new blood supply:

(2) suppressing development of kidney diseases due to cytokine induced proliferation of mesangial cells and/or glomerular epithelial cells that is useful for treating or preventing progression of diabetic glomerulosclerosis and other glomerulonephritides of various types and etiologies;

(3) preventing joint destruction accompanying rheumatoid arthritis due to proliferation of synovial cells;

(4) suppressing manifestations of psoriasis due to proliferation of keratinocytes and accumulation of inflammatory cells;

(5) suppressing accelerated atherogenesis involved in restenosis of coronary vessels or other arterial vessels following angioplasty;

(6) suppressing atherogenesis, coronary artery disease and other vasculopathies due to atherogenesis; and

(7) suppressing tumor growth via paracrine or autocrine mediated responses to PDGF, FGF EGF or VEGF that is useful for treating or preventing progression of tumors such as breast cancer stimulated through overexpression of her-2-neu receptor, wherein the inventive method comprises administering a compound that inhibits signal transduction through cellular accumulation of non-arachidonyl **phosphatidic acid** (PA) selected from the group consisting of 1-o-octadecanyl 2-oleoyl PA (687), 1-oleoyl 2-linoleoyl PA (697 or 698), 1-o-octadecanyl 2-linoleoyl PA (681), 1-o-octadecanyl-9,12-dienyl 2-linoleoyl PA (679), 1-myristoyl 2-oleoyl PA (645), 1-o-myristoyl 2-stearoyl PA (633), 1,2-sn-dilinoleoyl PA (695), 1-oleoyl 2-linoleoyl PA (697), 1-stearoyl 2-oleoyl PA (701), 1-o-oleoyl 2-20:4 PA (707), 1-o-linoleoyl 2-20:4 PA (705), 1-o-linoleoyl 2-20:5 PA (703), and combinations thereof.
PI US 5929081 19990727

L7 ANSWER 21 OF 56 USPATFULL on STN
AB There is disclosed a method for:

(1) inhibiting new blood vessel formation that is useful for treating or preventing progression of diabetic retinopathy, cavernous haemangiomas, Kaposi's sarcoma, tumors composed of endothelial-like cells, and growth of cancer cells by preventing their development of a new blood supply:

(2) suppressing development of kidney diseases due to cytokine induced proliferation of mesangial cells and/or glomerular epithelial cells that is useful for treating or preventing progression of diabetic glomerulosclerosis and other glomerulonephritides of various types and etiologies;

(3) preventing joint destruction accompanying rheumatoid arthritis due to proliferation of synovial cells;

(4) suppressing manifestations of psoriasis due to proliferation of keratinocytes and accumulation of inflammatory cells;

(5) suppressing accelerated atherogenesis involved in restenosis of coronary vessels or other arterial vessels following angioplasty;

(6) suppressing atherogenesis, coronary artery disease and other vasculopathies due to atherogenesis; and

(7) suppressing tumor growth via paracrine or autocrine mediated responses to PDGF, FGF EGF or VEGF that is useful for treating or preventing progression of tumors such as breast cancer stimulated through overexpression of her-2-neu receptor, wherein the inventive method comprises administering a compound that inhibits signal transduction through cellular accumulation of non-arachidonyl **phosphatidic acid** (PA) selected from the group consisting of 1-o-octadecanyl 2-oleoyl PA (687), 1-oleoyl 2-linoleoyl PA (697 or 698), 1-o-octadecanyl 2-linoleoyl PA (681), 1-o-octadecanyl-9,12-dienyl 2-linoleoyl PA (679), 1-myristoyl 2-oleoyl PA (645), 1-o-myristoyl 2-stearoyl PA (633), 1,2-sn-dilinoleoyl PA (695), 1-oleoyl 2-linolcoyl PA (697), 1-stearoyl 2-oleoyl PA (701), 1-o-oleoyl 2-20:4 PA (707), 1-o-linoleoyl 2-20:4 PA (705), 1-o-linoleoyl 2-20:5 PA (703), and combinations thereof.

PI US 5859018 19990112

L7 ANSWER 22 OF 56 USPATFULL on STN

AB In a method for treating or preventing allergy or allergic disorders an effective amount of a compound that inhibits intracellular generation of **phosphatidic acid** and diacylglycerol is administered. The intracellular generation of **phosphatidic acid** and diacylglycerol results from allergen presentation or mast cell/basophil activation.

PI US 5859017 19990112

L7 ANSWER 23 OF 56 USPATFULL on STN

AB There is disclosed a method for preventing tissue injury caused by tissue hypoxia and reoxygenation, comprising administering a compound that inhibits signal transduction by inhibiting cellular accumulation of linoleoyl **phosphatidic acid** (PA) through an inhibition of the enzyme LPAAT (lysophosphatidic acyltransferase).

PI US 5856331 19990105

L7 ANSWER 24 OF 56 USPATFULL on STN

AB There is disclosed a method for screening for inhibitors of cellular second messenger signaling regulated by lysophosphatidic acid acyl transferase (LPAAT) and **phosphatidic acid** phosphohydrolase (PAPH), which method comprises contacting target cells or appropriate subcullular elements under appropriate conditions of stimulation with a candidate drug and assessing the levels of the relevant subsets of **phosphatidic acid** (PA) and

diacylglycerol (DAG) in the presence and absence of the candidate drug.
PI US 5856115 19990105

L7 ANSWER 25 OF 56 USPATFULL on STN
AB Novel, heterocyclic compounds having at least one ring nitrogen, disclosed side chains and, in some embodiments, an oxygen ortho to the ring nitrogen inhibit inflammatory responses associated with TNF-α and fibroblast proliferation in vivo and in vitro. The compounds of the invention neither appreciably inhibit the activity of cAMP phosphodiesterase nor the hydrolysis of **phosphatidic acid**, and are neither cytotoxic nor cytostatic. Preferred compounds of the invention are esters. Methods for the use of the novel compounds to inhibit ceramide-mediated intracellular responses to stimuli in vivo (particularly TNF-α) are also described. The methods are expected to be of use in reducing inflammatory responses (for example, after angioplasty), in limiting fibrosis (for example, of the liver in cirrhosis), in inhibiting cell senescence, cell apoptosis and UV induced cutaneous immune suppression.
PI US 5843943 19981201

L7 ANSWER 26 OF 56 USPATFULL on STN
AB There is disclosed a method for:

(1) inhibiting new blood vessel formation that is useful for treating or preventing progression of diabetic retinopathy, cavernous haemangiomas, Kaposi's sarcoma, tumors composed of endothelial-like cells, and growth of cancer cells by preventing their development of a new blood supply:

(2) suppressing development of kidney diseases due to cytokine induced proliferation of mesangial cells and/or glomerular epithelial cells that is useful for treating or preventing progression of diabetic glomerulosclerosis and other glomerulonephritides of various types and etiologies;

(3) preventing joint destruction accompanying rheumatoid arthritis due to proliferation of synovial cells;

(4) suppressing manifestations of psoriasis due to proliferation of keratinocytes and accumulation of inflammatory cells;

(5) suppressing accelerated atherogenesis involved in restenosis of coronary vessels or other arterial vessels following angioplasty;

(6) suppressing atherogenesis, coronary artery disease and other vasculopathies due to atherogenesis; and

(7) suppressing tumor growth via paracrine or autocrine mediated responses to PDGF, FGF EGF or VEGF that is useful for treating or preventing progression of tumors such as breast cancer stimulated through overexpression of her-2-neu receptor, wherein the inventive method comprises administering a compound that inhibits signal transduction through cellular accumulation of non-arachidonyl **phosphatidic acid** (PA) selected from the group consisting of 1-o-octadecanyl 2-oleoyl PA (687), 1-oleoyl 2-linoleoyl PA (697 or 698), 1-o-octadecanyl 2-linoleoyl PA (681), 1-o-octadecanyl-9,12-dienyl 2-linoleoyl PA (679), 1-myristoyl 2-oleoyl PA (645), 1-o-myristoyl 2-stearoyl PA (633), 1,2-sn-dilinoleoyl PA (695), 1-oleoyl 2-linoleoyl PA (697), 1-stearoyl 2-oleoyl PA (701), 1-o-oleoyl 2-20:4 PA (707), 1-o-linoleoyl 2-20:4 PA (705), 1-o-linoleoyl 2-20:5 PA (703), and combinations thereof.
PI US 5795898 19980818

L7 ANSWER 27 OF 56 USPATFULL on STN
AB There is disclosed a pharmaceutical composition comprising

1-(5-oxohexyl)-3-methylxanthine in admixture with a pharmaceutically acceptable excipient, wherein the pharmaceutical composition is useful for treating an immune disorder. There is also disclosed a method to modulate the response of a target cell to a stimulus, which method comprises contacting said cell with an amount of 1-(5-oxohexyl)-3-methylxanthine or a pharmaceutical composition thereof, wherein said amount effects a diminution in elevated levels of unsaturated, non-arachidonate **phosphatidic acid** (PA) and diacylglycerol (DAG) derived from said PA in said cells wherein said elevated levels are stimulated by an agent capable of elevating levels of said PA and said DAG, said diminution being equal to or greater than the diminution effected by treating said cells with pentoxifylline (PTX) at a concentration of 0.5 mmol, thereby modulating the response of said target cell.

PI US 5795897 19980818

L7 ANSWER 28 OF 56 USPATFULL on STN

AB A cosmetic or medical composition for topical application to the skin. It results in the transdermal passage of an active ingredient, or in the introduction of such agent into the skin. The essential components of such compositions are phospholipids, an aliphatic alcohol of three or four carbon atoms or a combination of these alcohols, water and a compatible active ingredient, optionally with propylene glycol. Compositions advantageously comprise from 0.5% to 10% phospholipids, from 5% to 35% of a C.sub.3 - or C.sub.4 -alcohol, 15 to 30% ethanol, which contain together at least 20% but not more than 40 weight % of ethanol and the C.sub.3 -alcohol; up to 20 weight % propylene glycol, at least 20% water and at least one active ingredient. The compositions are suitable for the topical application of a wide variety of cosmetic and pharmaceutically active compounds. Phospholipids of choice are phosphatidylcholine, (P C), hydrogenated P C, **phosphatidic acid** (P A), phosphatidylserine (P S), phosphatidylethanolamine (P E), phosphatidylglycerol (P P G) and phosphatidylinositol (P I).

PI US 5716638 19980210

L7 ANSWER 29 OF 56 USPATFULL on STN

AB Magnetite particles suitable for injection into the blood stream of patients having enhanced resistance against agglomeration and uptake by the RES of the liver and spleen. The particles essentially consist of an iron oxide core and a phosphoric acid mono alkyl or alkenyl ester or glycerophospholipid/surfactant three dimensional shell surrounding the core. The core and the monoester or a micellar glycerophospholipid form an urchin-like structure which is further interlaced or intertwined with a non-ionic surfactant to produce a protective three dimensional shell which renders particles almost undetectable by the macrophages. Particles prepared according to the invention are kept in the blood circulation for long periods and represent excellent long lasting blood pool agents. Key components in the shell are (a) a polybasic mineral-organic species such as glycero **phosphatidic acid** in micellar form and (b) a block copolymer having successive hydrophilic and hydrophobic segments.

PI US 5587199 19961224

L7 ANSWER 30 OF 56 USPATFULL on STN

AB Magnetite particles suitable for injection into the blood stream of patients having enhanced resistance against agglomeration and uptake by the RES of the liver and spleen. The particles essentially consist of an iron oxide core and a phosphoric acid mono alkyl or alkenyl ester or glycerophospholipid/surfactant three dimensional shell surrounding the core. The core and the monoester or a micellar glycerophospholipid form an urchin-like structure which is further interlaced or intertwined with a non-ionic surfactant to produce a protective three dimensional shell which renders particles almost undetectable by the macrophages. Particles prepared according to the invention are kept in the blood

circulation for long periods and represent excellent long lasting blood pool agents. Key components in the shell are (a) a polybasic mineral-organic species such as glycero **phosphatidic acid** in micellar form and (b) a block copolymer having successive hydrophilic and hydrophobic segments.

PI US 5545395 19960813

L7 ANSWER 31 OF 56 USPATFULL on STN

AB Novel derivatives of non-steroidal anti-inflammatory, analgesic and/or antipyretic substances are provided which are useful in the treatment of superficial or deep inflammatory conditions, such as erythemas of various origins, inflammation of the joints or inflammation of bacterial origin.

The derivatives of the invention are salts of non-steroidal anti-inflammatory, analgesic and/or antipyretic substances (NSAs) and phosphatidic acidsand preferably have the formula

[NSA].sub.x [PA].sub.y

wherein

NSA represents a cation derived from said non-steroidal anti-inflammatory analgesic and/or antipyretic substance,

PA represents a **phosphatidic acid** or a mixture of different **phosphatidic acids**, and

x:y is from 2:1 to 1:2.

PI US 5484833 19960116

L7 ANSWER 32 OF 56 USPATFULL on STN

AB There is disclosed compounds and pharmaceutical compositions comprising compounds of the formula: ##STR1## wherein each of one or two R is independently ##STR2## wherein n is an integer from 7 to 20, at least one of X or Y is --OH and if one of X or Y is --OH then the other X or Y is H, CH.sub.3, CH.sub.3 --CH.sub.2, CH.sub.3 --(CH.sub.2).sub.2 --, or (CH.sub.3).sub.2 --CH.sub.2 --, and W.sub.1, W.sub.2, and W.sub.3 is independently H, CH.sub.3, CH.sub.3 --CH.sub.2, CH.sub.3 --(CH.sub.2).sub.2 --, or (CH.sub.3).sub.2 --CH.sub.2 --, and wherein the alkyl groups may be substituted by a hydroxyl, halo or dimethylamino group and/or interrupted by an oxygen atom, H or alkyl (1-4C), including resolved enantiomers and/or diastereomers, salts and mixtures thereof. In particular, the compounds lower elevated levels of unsaturated, non-arachidonate **phosphatidic acid** (PA) and diacylglycerol (DAG) derived from said PA within seconds of the primary stimulus and their contact with said cells. The modulatory effect depends on the nature of the target cell and the stimulus applied.

PI US 5473070 19951205

L7 ANSWER 33 OF 56 USPATFULL on STN

AB Magnetite particles suitable for injection into the blood stream of patients having enhanced resistance against agglomeration and uptake by the RES of the liver and spleen. The particles essentially consist of an iron oxide core and a phosphoric acid mono alkyl or alkenyl ester or glycerophospholipid/surfactant three dimensional shell surrounding the core. The core and the monoester or a micellar glycerophospholipid form an urchin-like structure which is further interlaced or intertwined with a non-ionic surfactant to produce a protective three dimensional shell which renders particles almost undetectable by the macrophages. Particles prepared according to the invention are kept in the blood circulation for long periods and represent excellent long lasting blood pool agents. Key components in the shell are (a) a polybasic mineral-organic species such as glycero **phosphatidic**

acid in micellar form and (b) a block copolymer having successive hydrophilic and hydrophobic segments.

PI US 5464696 19951107

L7 ANSWER 34 OF 56 USPATFULL on STN

AB There is disclosed compounds and pharmaceutical compositions having a xanthine core of the formula: ##STR1## wherein each of one or two R is independently ##STR2## wherein n is an integer from about 3 to about 18 forming a hydrocarbon chain, wherein the hydrocarbon chain may have one or more double bonds (preferably in a cis configuration), and may be substituted by a hydroxyl, halo or dimethylamino group and/or interrupted by an oxygen atom. The compounds lower elevated levels of unsaturated, non-arachidonate **phosphatidic acid** (PA) and diacylglycerol (DAG) derived from said PA within seconds of the primary stimulus and their contact with cells. The modulatory effect depends on the nature of the target cell and the stimulus applied.

PI US 5440041 19950808

L7 ANSWER 35 OF 56 USPATFULL on STN

AB A phospholipid composition which satisfies the following requirements (i) and (ii):

(i) a weight ratio of a nitrogen-containing phospholipid to the sum of a phospholipid, a glycolipid and a sterol derivative of less than 0.5; and

(ii) a ratio of an area of a high-polar substance on a silica gel thin-layer chromatogram to the sum of areas of a phospholipid, a glycolipid and a sterol derivative on a silica gel thin-layer chromatogram of less than 500 area/μg. A fat and oil composition containing from 0.001 to 30% by weight of the phospholipid composition is also disclosed. The present invention enables the blending of phospholipids with a frying oil, which has been considered difficult since it causes heat coloration. Thus a fat and oil composition, which is excellent in mold-release characteristics during cooking, has a good smell during heating, suffers from no coloration of oil after heating and shows a good flavor, can be obtained. A process for producing **phosphatidic acids** and lysophosphatidic acids is further disclosed.

PI US 5362892 19941108

L7 ANSWER 36 OF 56 USPATFULL on STN

AB There is disclosed compounds and pharmaceutical compositions having a xanthine core and one or two hydrocarbon side chains bonded to a ring nitrogen atom, wherein the hydrocarbon side chains are independently a straight chain hydrocarbon having at least one double bond in a carbon chain length of from about 4 to about 18 carbon atoms in length, wherein multiple double bonds are separated from each other by at least three carbon atoms, and wherein the hydrocarbon chain may be substituted by a hydroxyl, halo or dimethylamino group and/or interrupted by an oxygen atom. The compounds lower elevated levels of unsaturated, non-arachidonate **phosphatidic acid** (PA) and diacylglycerol (DAG) derived from said PA within seconds of the primary stimulus and their contact with cells. The modulatory effect depends on the nature of the target cell and the stimulus applied.

PI US 5354756 19941011

L7 ANSWER 37 OF 56 USPATFULL on STN

AB Compounds of the formula ##STR1## wherein each of one or two R is independently ##STR2## wherein n is an integer from 4 to 18, each R.sub.1 ' and R.sub.2 ' is independently H, alkyl (1-4C) or alkenyl (1-4C); and R.sub.3 ' and R.sub.4 ' are independently H or CH.sub.3 ; and wherein the alkyl or alkenyl may be substituted by a hydroxyl, halo or dimethylamino group and/or interrupted by an oxygen atom, H or alkyl (1-4C), including resolved enantiomers and/or diastereomers and mixtures

thereof. Preferably, n is from 6 to 10, R.sub.1 ' and R.sub.2 ' are independently H or methyl and R.sub.3 ' and R.sub.4 ' are H. In particular, the compounds lower elevated levels of unsaturated, non-arachidonate **phosphatidic acid** (PA) and diacylglycerol (DAG) derived from said PA within seconds of the primary stimulus and their contact with said cells. The modulatory effect depends on the nature of the target cell and the stimulus applied.

PI US 5340813 19940823

L7 ANSWER 38 OF 56 USPATFULL on STN

AB Salts of a pharmacologically active, naturally occurring or synthetic alkaloids, or alkaloid derivatives and a **phosphatidic acid** are provided, which preferably have the formula

[Alk].sub.x [PA].sub.y

wherein

Alk represents a cation derived from said pharmacologically active, naturally occurring or synthetic alkaloid, or alkaloid derivative,

PA represents a **phosphatidic acid** or a mixture of different **phosphatidic acids**, and

x:y is from 2:1 to 1:2.

The therapeutic use of the salts of the invention in the treatment of syndromes affecting the elderly, particularly conditions that are related to changes in cerebral metabolism and reduced blood flow are decribed, as well as cosmetic methods.

PI US 5334385 19940802

L7 ANSWER 39 OF 56 USPATFULL on STN

AB The therapeutic use of new salts of physostigmine in the treatment of syndromes related to changes in cerebral metabolism in the elderly is described. The new salts of physostigmine, which are based on **phosphatidic acid**, are highly lipophilic and exhibit excellent bioavailability when administered orally, transcutaneously or transepidermally.

PI US 5314906 19940524

L7 ANSWER 40 OF 56 USPATFULL on STN

AB Compounds of the formula ##STR1## including the resolved enantiomers and/or diastereomers and mixtures thereof wherein each of one or two R is independently ##STR2## wherein n is 1-16 and R' is H or alkyl(1-4C); and wherein each remaining R is independently H, alkyl(1-6C), alkenyl(1-6C) or benzyl; an wherein said alkyl or alkenyl may be substituted by a hydroxyl, halo, or dimethylamino group, and/or interrupted by an oxygen atom, are useful in modulating the effects of internal and external stimuli on cells by reversing the effects of these stimuli on the short-term secondary messenger pathways. In particular, the compounds lower elevated levels of unsaturated, non-arachidonate **phosphatidic acid** (PA) and diacylglycerol (DAG) derived from said PA within seconds of the primary stimulus and their contact with said cells. The modulatory effect depends on the nature of the target cell and the stimulus applied.

PI US 5288721 19940222

L7 ANSWER 41 OF 56 USPATFULL on STN

AB Process for fractionating phosphatide mixtures into two or more fractions which are enriched in one or more of phosphatidyl choline (PC), phosphatidyl ethanolamine (PE), phosphatidyl inositol (PI) and **phosphatidic acid** (PA) by carrying out extraction steps using alcoholic solvent in which the solubilities of PC, PE and PA

are controlled by suitably adjusting the acidity of the solvent, the pH being adjusted to above 8 for solubilizing PC and PE and to below 5 for solubilizing PA. PI is substantially insoluble in the solvent used in the process and thus is mainly recovered in the extraction residue. Further parameters influencing the solubility of the components of the phosphatide mixtures to be fractionated are water content of the alcoholic solvent, temperature and choice of bases and acids for adjusting the pH. For further separating fractions rich in PC and PE di- or trivalent metal salt solutions are used.

PI US 5214171 19930525

L7 ANSWER 42 OF 56 USPATFULL on STN

AB A process for the prodution of phosphatiolic acid is carried out by treating phospholipids with an enzyme capable of hydrolyzing a phospholipid into **phosphatidic acid** and a nitrogen-containing base and another enzyme capable of hydrolyzing a phospholipid into a diglyceride and a phosphoryl base. Further, another process for the production of **phosphatidic acid** is carried out by treating phospholipids with a treatment product of an oilseed is disclosed.

PI US 5183750 19930202

L7 ANSWER 43 OF 56 USPATFULL on STN

AB Provided is a novel salt of sn-glycerol-3-phosphate comprising mono-N,N-dimethyl-4-aminopyridine along with methods for making same and using same for the production of diacyl **phosphatidic acids**.

PI US 5162535 19921110

L7 ANSWER 44 OF 56 USPATFULL on STN

AB Provided is a novel salt of sn-glycerol-3-phosphate comprising mono-N,N-dimethyl-4-aminopyridine along with methods for making same and using same for the production of diacyl **phosphatidic acids**.

PI US 5166351 19921124

L7 ANSWER 45 OF 56 USPATFULL on STN

AB The present invention concerns a platinum (II) four-coordinant complex having the formula: ##STR1## wherein R.sub.1 is an alkyl diamine or cycloalkyl diamine and R.sub.2 and R.sub.3 are an alkylcarboxylato containing from five to ten carbon atoms. The R.sub.1 is preferably trans-D,L-1,2-diaminocyclohexane, trans-R,R-1,2-diaminocyclohexane, trans-S,S-1,2-diaminocyclohexane, cis-1,2-diaminocyclohexane ethylene diamine or 1,1-bis(aminomethyl)cyclohexane. The R.sub.2 and R.sub.3 are preferably neohexanoato, neoheptanoato, neononanoato, neodecanoato, neooctanoato, neopentanoato, 2-ethylhexanoato, 2-ehtylbutyrato, 2-propylpropanoato, 2-methyl-2-ethylheptanoato, 2,2-diethylhexanoato, 2,2-dimethyl-4-ethylhexanoato, 2,2-diethyl-4-methylpentanoato, 2,2-dimethyloctanoato, 2-methyl-2-ethylheptanoato, 2,2-diethylhexanoato, 2,2-diethyl-4-methylpentanoato or 2,2,4,4-tetramethylpentanoato.

In an important further aspect, the present invention involves preparation and therapeutic use of a liposome comprising a phospholipid and a four-coordinate platinum complex having the formula: ##STR2## wherein R.sub.1 is an alkyl diamine or cycloalkyl diamine and R.sub.2 and R.sub.3 are an alkylcarboxylato containing from about five to about fourteen carbon atoms. The R.sub.1, R.sub.2 and R.sub.3 functions are preferably as described above with the exception that R.sub.2 and R.sub.3 may have even longer alkyl chains such as myristate and laurate, i.e., up to fourteen carbon atoms. For therapeutic use, a pharmaceutical composition comprising this liposome and a pharmaceutically acceptable carrier or diluent may be readily prepared by methods well known to those skilled in the art. The liposomes are useful vehicles for solubilizing the otherwise aqueously insoluble complexes of the present

invention. The phospholipids of the liposomes may be one or more of phosphatidylglycerol, phosphatidylcholine, sphingomyelin, **phosphatidic acid** or phosphatidylserine. The liposomes more preferably consist essentially of phosphatidylglycerol, phosphatidylcholine or a combination thereof and may also comprise cholesterol. The liposomes of the present most preferably comprise phospholipid consisting essentially of dimyristoylphosphatidylglycerol, dimyristoylphosphatidylcholine or a combination thereof.

PI US 5117022 19920526

L7 ANSWER 46 OF 56 USPATFULL on STN

AB A process for modifying the properties of egg yolk, which comprises treating egg yolk with an effective amount of phospholipase D derived from a microorganism, thereby to convert phospholipids contained in said egg yolk into **phosphatidic acid**.

PI US 5080911 19920114

L7 ANSWER 47 OF 56 USPATFULL on STN

AB Novel diacylglycerophosphoric acid esters include a hydrophobic diacyl glycerol portion to provide water insolubility and a head group which forms a chromophore or a chromophore precursor when the head group is enzymatically released and are chromogenic substrates useful to assay for enzymes catalyzing the cleavage of phosphate ester or phosphoanhydride bonds adjacent or opposite to the **phosphatidic acid** region of a phospholipid molecule.

PI US 5011964 19910430

L7 ANSWER 48 OF 56 USPATFULL on STN

AB The present invention involves a liposomal agent for treating disseminated fungal infection in an animal. This liposomal agent comprises the polyene antifungal compound mepartricin. The mepatricin is encapsulated within a liposome. The liposome in which the mepartricin is incorporated is preferably a stable multilamellar vesicle. The liposome broadly comprises one or more lipids one or more of phosphomonoglyceride, **phosphatidic acid** and sphingolipid. The lipids are preferably one or more of phosphatidylcholine, phosphatidylserine, phosphatidylglycerol, sphingomyelin or **phosphatidic acid**. The lipids are most preferably one or more of dimyristoylphosphatidylchlorine, dimyristoylphosphatidylglycerol, phosphatidylcholine and phosphatidylglycerol. The liposome of the present invention may comprise a sterol most preferably cholesterol. An important aspect of the present invention involves a method for treating disseminated fungal infection in an animal. This method comprises administering to an animal subject to disseminated fungal infection a fungicidally effective amount of mepartricin encapsulated within a liposome. The liposome is composed as described above. The administering is preferably parenteral in most instances but may be oral or topical if specific colonies of fungus are thereby more directly reached. This treatment method is most useful when the animal is a human suffering from disseminated fungal infection. The method of treatment involves a fungicidally effective amount of liposome-incorporated mepartricin of between about 1 mg mepartricin/kg body weight and about 6 mg mepartricin/kg body weight.

PI US 4981690 19910101

L7 ANSWER 49 OF 56 USPATFULL on STN

AB A pan-releasing oil composition comprises fats and oils and 0.1 to 10 percent by weight, based on the entire composition, of a phospholipid mixture in which the sum total of contents of **phosphatidic acid** and/or a salt of **phosphatidic acid** and lysophosphatidic acid and/or a salt of lysophosphatidic acid ranges from 15 to 100 percent by weight based on the weight of the total phospholipids.

PI US 4849019 19890718

L7 ANSWER 50 OF 56 USPATFULL on STN

AB The present invention involves a liposomal agent for treating disseminated fungal infection in an animal. This liposomal agent comprises the polyene antifungal compound nystatin. The nystatin is encapsulated within a liposome. The liposome in which the nystatin is incorporated is preferably a stable multilamellar vesicle. The liposome broadly comprises one or more lipids one or more of phosphomonoglyceride, **phosphatidic acid** and sphingolipid. The lipids are preferably one or more of phosphatidylcholine, phosphatidylserine, phosphatidylglycerol, sphingomyelin or **phosphatidic acid**. The lipids are most preferably one or more of dimyristoylphosphatidylcholine, dimyristoylphosphatidylglycerol, phosphatidylcholine and phosphatidylglycerol. The liposome of the present invention may comprise a sterol most preferably cholesterol. An important aspect of the present invention involves a method for treating disseminated fungal infection in an animal. This method comprises administering to an animal subject to disseminated fungal infection a fungicidally effective amount of nystatin encapsulated within a liposome. The liposome is composed as described above. The administering is preferably parenteral in most instances but may be oral or topical if specific colonies of fungus are thereby more directly reached. This treatment method is most useful when the animal is a human suffering from disseminated fungal infection. The method of treatment involves a fungicidally effective amount of liposome-incorporated nystatin of between about 1 mg nystatin/kg body weight and about 6 mg nystatin/kg body weight. In a most preferred embodiment the treatment method comprises liposomes consisting essentially of dimyristoylphosphatidylcholine and dimyristoylphosphatidylglycerol in a ratio of about 7:3.

PI US 4812312 19890314

L7 ANSWER 51 OF 56 USPATFULL on STN

AB A process for producing at the same time degummed vegetable oils and gums of high **phosphatidic acid** content is described. The starting materials for this process are vegetable oils which have been conventionally water degummed and accordingly still contain too much non-hydratable phosphatides and iron for further processing by physical refining and providing a refined oil of good keepability. Therefore in a first stage of the disclosed process a non-toxic aqueous acid, e.g. phosphoric acid, is finely dispersed in the water degummed oil and sufficient contact time is allowed to complete the decomposition of the metal salts of **phosphatidic acid**. In a second stage a base is added to increase the pH above 2.5 without substantial formation of soap and in a third stage the aqueous phase containing the gums and the oil phase are separated. Surprisingly this process not only results in a degummed oil with very low phosphorus and iron contents which make the oil suitable for physical refining but also provides gums of high **phosphatidic acid** content with improved usability.

PI US 4698185 19871006

L7 ANSWER 52 OF 56 USPATFULL on STN

AB The present invention relates to a novel advantageous process for the preparation of unilamellar liposomes in aqueous phase by converting a suitable lipid component, e.g. **phosphatidic acid**, into the ionic form by subjecting the lipid dispersion to a change in pH value and subsequently neutralizing it. Formation of the unilamellar liposomes is spontaneous, i.e. it takes place without additional external supply of energy. The liposomes obtainable by the process of this invention can be used therapeutically as carriers for drugs of the most widely different kind.

PI US 4619794 19861028

L7 ANSWER 53 OF 56 USPATFULL on STN
AB An emulsifier adapted for use in a nutritive oil-in-water emulsion suitable for parenteral administration is produced by extracting vegetable lecithin with alkyl alcohols having from 1 to 3 carbon atoms, or mixtures thereof, followed by fractional precipitation at specific temperatures and concentrations effective to cause the removal of toxic materials. The alcohol soluble phospholipid fraction produced by the process contains an increased level of phosphatidyl choline and reduced levels of phosphatidyl ethanolamine, inositol phospholipids, **phosphatidic acid** and glycolipids.
PI US 4563354 19860107

L7 ANSWER 54 OF 56 USPATFULL on STN
AB The present invention provides a preparation for conditioning and grooming the hair. The active ingredients are vegetable lecithins, as well as cytochromes, phosphatidyl inositols, phosphatides and **phosphatidic acids**. Apart from the vegetable lecithins the other active ingredients are obtained by aqueous or ethereal extraction from fresh animal hearts, more particularly bovine hearts.
PI US 4515778 19850507

L7 ANSWER 55 OF 56 USPATFULL on STN
AB Nucleotides of nucleosides or bases having known cytotoxic activity are reacted to form corresponding cytotoxic liponucleotide analogs by phosphorylation of molecular species of **phosphatidic acids**. The resulting cytotoxic liponucleotide analogs exhibit an enhanced therapeutic index and broader spectrum of antitumor activity as compared to the parent nucleoside or base compounds, apparently due to an improved selective uptake thereof by metabolizing tumor cells, and are thus useful cytotoxic, antiviral and antineoplastic agents.
PI US 4291024 19810922

L7 ANSWER 56 OF 56 USPATFULL on STN
AB A therapeutic agent for treating consciousness disorder and perception and movement which comprises as an essential active ingredient a **phosphatidic acid** derivative selected from a phosphatidylcholine, a **phosphatidic acid** and a phosphatidylethanolamine in admixture with a conventional carrier. Said agent is administered to the patient suffered from consciousness disorder and perception and movement disorder, particularly the post-traumatic syndrome of the head injury and the sequelae of apoplexy or whiplash injury in oral or parenteral route, preferably in an intravenous route.
PI US 4263286 19810421